

Access DB# 194842

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Angela Martin Examiner #: 76027 Date: 7/7/06
Art Unit: 1748 Phone Number: 305712721258 Serial Number: 10/754,453
Mail Box and Bldg/Room Location: Rem 6B61 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: * BIB SHEET SCIENTIFIC REFERENCE BR
Inventors (please provide full names): ATTACHED Sci & Tech Inf. Cntr.
JUL 10 2006

Earliest Priority Filing Date: _____ Pat. & T.M. Office

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

polyether-modified silicon oil
Claim 1, formula (1) ^{or} formula (2)
in an electrolyte comprising a lithium salt
and cyclic carbonate

* CLAIMS ATTACHED

STAFF USE ONLY

	Type of Search	Vendors and cost where applicable
Searcher: <u>ulh</u>	NA Sequence (#) _____	STN <u>5340-13</u>
Searcher Phone #: _____	AA Sequence (#) _____	Dialog _____
Searcher Location: _____	Structure (#) <u>1</u>	Questel/Orbit _____
Date Searcher Picked Up: <u>7/7/06</u>	Bibliographic _____	Dr.Link _____
Date Completed: <u>7/7/06</u>	Litigation _____	Lexis/Nexis _____
Searcher Prep & Review Time: <u>60</u>	Fulltext _____	Sequence Systems _____
Clerical Prep Time: <u>30</u>	Patent Family _____	WWW/Internet _____
Online Time: <u>75</u>	Other _____	Other (specify) _____



STIC Search Report

EIC 1700

STIC Database Tracking Number: 194842

**TO: Angela Martin
Location: REM 6B61
Art Unit : 1745
July 7, 2006**

Case Serial Number: 10/754453

**From: Usha Shrestha
Location: EIC 1700
REMSSEN 4B28
Phone: 571/272-3519
usha.shrestha@uspto.gov**

Search Notes



STIC Search Results Feedback Form

EIC17000

Questions about the scope or the results of the search? Contact *the EIC searcher* or contact:

Kathleen Fuller, EIC 1700 Team Leader
571/272-2505 REMSEN 4B28

Voluntary Results Feedback Form

- I am an examiner in Workgroup: Example: 1713
- Relevant prior art **found**, search results used as follows:

- ☐ 102 rejection
- ☐ 103 rejection
- ☐ Cited as being of interest.
- ☐ Helped examiner better understand the invention.
- ☐ Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- ☐ Foreign Patent(s)
- ☐ Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ Relevant prior art **not found**:

- ☐ Results verified the lack of relevant prior art (helped determine patentability).
- ☐ Results were not useful in determining patentability or understanding the invention



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3ib Data Sheet

CONFIRMATION NO. 7997

SERIAL NUMBER 10/754,453	FILING OR 371(c) DATE 01/09/2004 RULE	CLASS 429	GROUP ART UNIT 1745	ATTORNEY DOCKET NO. 51752/DBP/Y35
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APPLICANTS

Cheol-Soo Jung, Ohsan-city, KOREA, REPUBLIC OF;
 Takitaro Yamaguchi, Yokohama-shi, JAPAN;
 Ryuichi Shimizu, Yokohama-shi, JAPAN;

*** CONTINUING DATA ********** FOREIGN APPLICATIONS *******

JAPAN 2003-003047 01/09/2003
 JAPAN 2003-363591 10/23/2003
 REPUBLIC OF KOREA 2003-97895 12/26/2003

F REQUIRED, FOREIGN FILING LICENSE GRANTED **

04/16/2004

Foreign Priority claimed <input type="checkbox"/> yes <input type="checkbox"/> no	STATE OR COUNTRY KOREA, REPUBLIC OF	SHEETS DRAWING 25	TOTAL CLAIMS 17	INDEPENDENT CLAIMS 4
35 USC 119 (a-d) conditions met <input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> Met after Allowance				
Verified and acknowledged Examiner's Signature _____ Initials _____				

ADDRESS

3363

TITLE

Electrolyte for rechargeable lithium battery and rechargeable lithium battery comprising same

FILING FEE RECEIVED 986	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	<input type="checkbox"/> All Fees
		<input type="checkbox"/> 1.16 Fees (Filing)
		<input type="checkbox"/> 1.17 Fees (Processing Ext. of time)
		<input type="checkbox"/> 1.18 Fees (Issue)
		<input type="checkbox"/> Other _____
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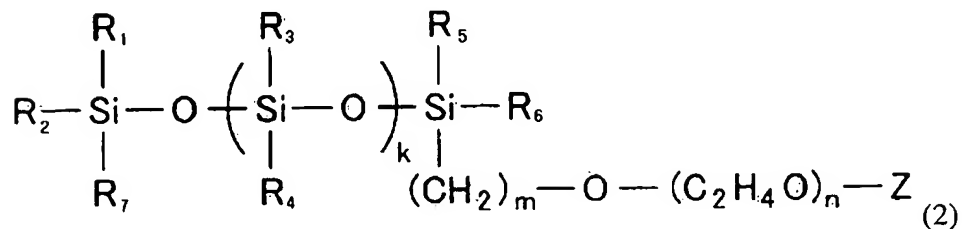
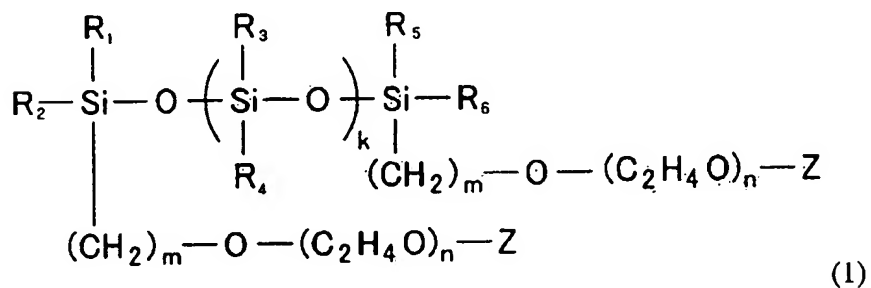
Appln No. 10/754,453
 Amdt date April 17, 2006
 Reply to Office action of January 17, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A non-aqueous electrolyte comprising:
 a cyclic carbonate;
 a lithium salt; and
 a polyether-modified silicon oil represented by formulas 1 or 2 in which a polyether chain
 is bonded to a terminal end of a linear polysiloxane chain:



where k is an integer from 0 to 10;

m is a natural number from 2 to 4;

n is a natural number from 1 to 4;

R₁ to R₇ are independently or identically, selected from hydrogen or C₁ to C₅ alkyls; and

Z is CH₃ or C₂H₅.

Appln No. 10/754,453

Amdt date April 17, 2006

Reply to Office action of January 17, 2006

2. (Original) The electrolyte of claim 1, wherein the polyether-modified silicon oil has a viscosity of less than 10cSt at 25°C.

3. (Original) The electrolyte of claim 1, wherein the polyether-modified silicon oil has a flash point of 120°C or more.

4. (Original) The electrolyte of claim 1 further comprising a chain carbonate.

5. (Original) The electrolyte of claim 1 further comprising a fluorinated cyclic carbonate.

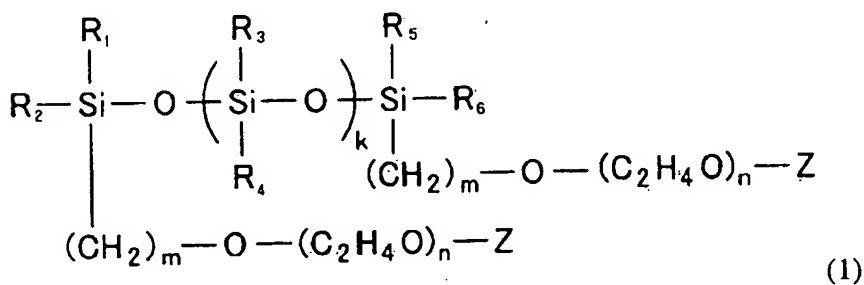
6.

(Original) A rechargeable lithium battery comprising:

a positive electrode;

a negative electrode; and

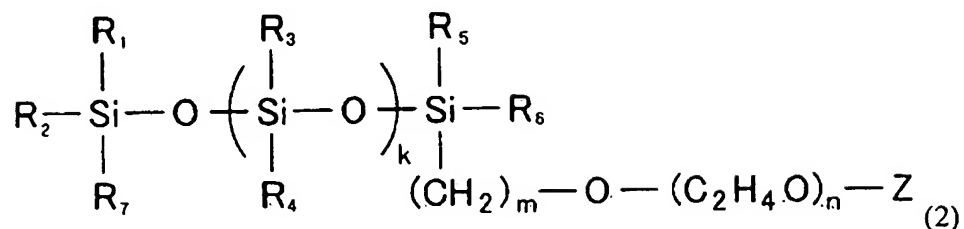
a polyether-modified silicon oil represented by formulas 1 or 2 in which a polyether chain is bonded to a terminal end of a linear polysiloxane chain, a cyclic carbonate and a lithium salt:



Appln No. 10/754,453

Amdt date April 17, 2006

Reply to Office action of January 17, 2006



where k is an integer from 0 to 10;

m is a natural number from 2 to 4;

n is a natural number from 1 to 4;

R₁ to R₇ are independently or identically, selected from hydrogen or C₁ to C₅ alkyls; and

Z is CH₃ or C₂H₅.

7. (Original) The rechargeable lithium battery of claim 6, wherein the negative electrode comprises a thin layer comprising a compound selected from the group consisting of polyacrylate compounds, aziridine compounds, fluorinated cyclic carbonates and mixtures thereof.

8. (Original) The rechargeable lithium battery of claim 6, wherein the non-aqueous electrolyte further comprises a chain carbonate.

9. (Original) The rechargeable lithium battery claim 6, wherein the non-aqueous electrolyte further comprises a fluorinated cyclic carbonate.

10. (Original) An electrolyte for a rechargeable lithium battery comprising:
a polyether-modified silicon oil having a viscosity of less than 10cSt, a cyclic carbonate, and a lithium salt.

11. (Original) The electrolyte of claim 10, wherein the polyether-modified silicon oil has a flash point of 120°C or more.

Appln No. 10/754,453

Amdt date April 17, 2006

Reply to Office action of January 17, 2006

12. (Original) The electrolyte of claim 10 further comprising a chain carbonate.

13. (Original) The electrolyte of claim 10 further comprising a fluorinated cyclic carbonate.

14. (Currently Amended) A rechargeable lithium battery comprising:

a positive electrode;

a negative electrode; and

an electrolyte comprising a polyether-modified silicon oil having a viscosity of less than 10cSt, a cyclic carbonate, and a lithium salt wherein the polyether-modified silicon oil includes end silicons with terminal bonds consisting of Si-C or Si-H bonds.

15. (Original) The rechargeable lithium battery of claim 14, wherein the negative electrode comprises a thin layer comprising a compound selected from the group consisting of polyacrylate compounds, aziridine compounds, and fluorinated cyclic carbonates, or a combination thereof on a surface thereof.

16. (Original) The rechargeable lithium battery of claim 14, wherein the electrolyte further comprises a chain carbonate.

17. (Original) The rechargeable lithium battery claim 14, wherein the electrolyte further comprises a fluorinated cyclic carbonate.

=> fil reg

FILE 'REGISTRY' ENTERED AT 12:09:07 ON 07 JUL 2006

=> d his

FILE 'HCAPLUS' ENTERED AT 11:05:41 ON 07 JUL 2006

L1 2 S US20040197668/PN
SEL RN

FILE 'REGISTRY' ENTERED AT 11:05:58 ON 07 JUL 2006

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L3 STR
L4 9 S L3
L5 129 S L3 FUL
L6 6 S L5 AND L2
SAV L5 MAR453/A
L7 1 S 7439-93-2/RN
L8 1 S 21324-40-3/RN
L9 1 S 132843-44-8/RN
L10 1 S 96-49-1/RN
L11 1 S 105-58-8/RN
L12 1 S 463-79-6/RN
L13 1 S 114435-02-8/RN

FILE 'HCAPLUS' ENTERED AT 11:47:07 ON 07 JUL 2006

L14 356 S L5
L15 3 S L6
L16 17346 S L7/D OR LITHIUM(2A) SALT?
L17 4866 S L8
L18 548 S L9
L19 21364 S L16-L18
L20 13 S L14 AND L19
L21 8773 S L10
L22 61 S L13
L23 8787 S L21 OR L22
L24 4 S L20 AND L23
L25 12 S L14 AND LITHIUM(2A) BATTER?
L26 22 S L14 AND ?LITHIUM?
L27 11 S L26 AND ?CARBONAT?
L28 11 S L24 OR L27
L29 15 S L25 OR L28
L30 20 S L20 OR L29
L31 13 S L14 AND ELECTROCHEM?/SC, SX
L32 22 S L30 OR L31
L33 18 S L32 AND (1840-2003)/PRY, AY, PY
L34 5 S L14 AND L23
L35 23 S L14 AND ?CARBONAT?
L36 23 S L34 OR L35
L37 8 S L36 AND ELECTROCHEM?/SC, SX
L38 7 S L37 AND (1840-2003)/PRY, AY, PY
L39 18 S L33 OR L38

=> d que 139

L3 STR

Si~O~Si~G1~O~G2~Ak Ak~O
1 2 3 4 5 6 7 @8 @9

REP G1=(2-4) :CH2
REP G2=(1-4) 8-5 9-7
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 7
CONNECT IS E2 RC AT 8
DEFAULT MLEVEL IS ATOM
GGCAT IS SAT AT 7
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 9

STEREO ATTRIBUTES: NONE

L5 129 SEA FILE=REGISTRY SSS FUL L3
L7 1 SEA FILE=REGISTRY ABB=ON 7439-93-2/RN
L8 1 SEA FILE=REGISTRY ABB=ON 21324-40-3/RN
L9 1 SEA FILE=REGISTRY ABB=ON 132843-44-8/RN
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L20 13 SEA FILE=HCAPLUS ABB=ON L14 AND L19
L21 8773 SEA FILE=HCAPLUS ABB=ON L10
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L38 7 SEA FILE=HCAPLUS ABB=ON L37 AND (1840-2003)/PRY,AY,PY

L39 18 SEA FILE=HCAPLUS ABB=ON L33 OR L38

=> fil hcap
FILE 'HCAPLUS' ENTERED AT 12:09:18 ON 07 JUL 2006

=> d l39 1-18 ibib abs hitstr hitind

L39 ANSWER 1 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2006:148237 HCAPLUS
DOCUMENT NUMBER: 144:236250
TITLE: Electrochemical device having an electrolyte
that includes a tetrasiloxane
INVENTOR(S): West, Robert C.; Amine, Khalil; Zhang,

Zhengcheng; Wang, Qingzheng; Vissers, Donald
 R.
 PATENT ASSIGNEE(S): USA
 SOURCE: U.S. Pat. Appl. Publ., 19 pp., Cont.-in-part
 of U.S. Ser. No. 810,081.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 11
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2006035154	A1	20060216	US 2004-971926	2004 1021
US 2004248014	A1	20041209	US 2004-810081	2004 0325
US 2005170253	A1	20050804	US 2004-971912	2004 1021
PRIORITY APPLN. INFO.:			US 2003-502017P	P 2003 0910
			US 2004-542017P	P 2004 0204
			US 2004-543898P	P 2004 0211
			US 2004-543951P	P 2004 0211
			US 2004-810019	A2 2004 0325
			US 2004-810080	A2 2004 0325
			US 2004-810081	A2 2004 0325
			US 2003-443892P	P 2003 0130
			US 2003-446848P	P 2003 0211

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US 2003-451065P      P
                        2003
                        0226

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WO 2003-US8783      A2
                        2003
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US 2004-563848P      P
                        2004
                        0419

US 2004-563849P      P
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                        0419

US 2004-563850P      P
                        2004
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US 2004-563852P      P
                        2004
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US 2004-565211P      P
                        2004
                        0422

US 2004-601452P      P
                        2004
                        0813

US 2004-606340P      P
                        2004
                        0901

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OTHER SOURCE(S): MARPAT 144:236250

AB An electrochem. device has an electrolyte that includes one or more tetrasiloxanes. The tetrasiloxanes have a backbone with two central silicons and two terminal silicons. A first one of the silicons is linked to a side chain that includes a poly(alkylene oxide) moiety. A second one of the silicons is linked to a side chain that includes a poly(alkylene oxide) moiety or to a side chain that includes a cyclic carbonate moiety. When each of the central silicons is linked to a side chain that includes a poly(alkylene oxide) moiety, each of the central silicons is directly linked to the poly(alkylene oxide) moiety.

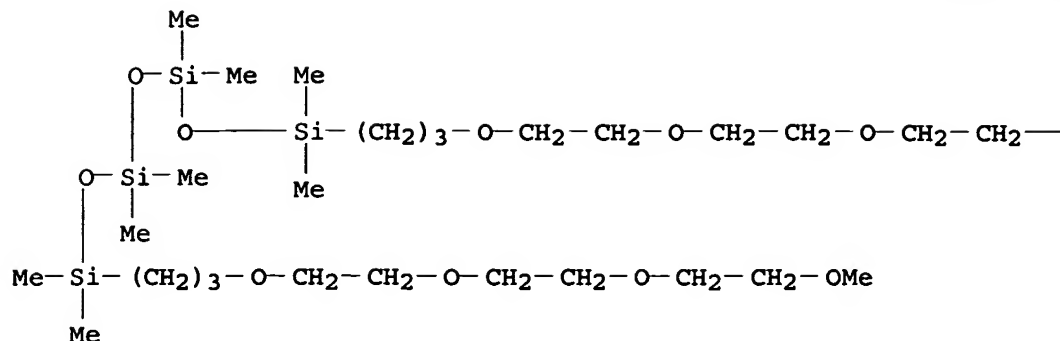
IT 876405-49-1P

(battery electrolyte containing tetrasiloxane derivative)

RN 876405-49-1 HCAPLUS

CN Tetrasiloxane, 1,1,3,3,5,5,7,7-octamethyl-1,7-bis(4,7,10,13-tetraoxatetradec-1-yl)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

— OMe

INCL 429313000; 029623100; 429311000; 429312000; 429317000; 429309000;
429307000; 429302000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy
Technology)

Section cross-reference(s): 38

IT Secondary batteries

(lithium; electrochem. device having electrolyte that
includes tetrasiloxane)

IT 7439-93-2, Lithium, uses 7782-42-5, SFG 6, uses
(battery anode; battery electrolyte containing
tetrasiloxane derivative)

IT 193214-24-3, Aluminum cobalt lithium nickel oxide
(Al_{0.05}Co_{0.15}LiNi_{0.80}O₂)
(battery cathodes; battery electrolyte containing tetrasiloxane
derivative)

IT 9003-20-7, Polyvinyl acetate 9003-53-6, Polystyrene 9011-14-7,
PMMA 9011-17-0, Hexafluoropropylene-vinylidene fluoride
copolymer 24937-79-9, PVDF 25014-41-9, Polyacrylonitrile
25322-68-3, PEO 27208-14-6D, Tetrasiloxane, derivs.
244761-29-3, Lithium bisoxalatoborate

(battery electrolyte containing tetrasiloxane derivative)

IT 15022-08-9DP, Allyl carbonate, reaction products with
triethylene glycol and disiloxane 16066-09-4DP, reaction
products with triethylene glycol and allyl carbonate
27252-80-8DP, reaction products with allyl carbonate and
disiloxane 126509-78-2P 876405-49-1P

(battery electrolyte containing tetrasiloxane derivative)

L39 ANSWER 2 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:431288 HCAPLUS

DOCUMENT NUMBER: 142:484779

TITLE: Battery having electrolyte including one or
more additives

INVENTOR(S): Yoon, Sang Young; Nakahara, Hiroshi; Amine,

PATENT ASSIGNEE(S): Khalil
 SOURCE: USA
 U.S. Pat. Appl. Publ., 31 pp., Cont.-in-part
 of U.S. Ser. No. 496,231,
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 11
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005106470	A1	20050519	US 2004-962125	2004 1007
WO 2003083970	A1	20031009	WO 2003-US2127	2003 0122

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 CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI,
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 KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK,
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WO 2003083971	A1	20031009	WO 2003-US2128	2003 0122
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WO 2003083974	A1	20031009	WO 2003-US8783	2003 0320
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US 2005170253	A1	20050804	US 2004-971912	
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PRIORITY APPLN. INFO.:			WO 2003-US2127	A
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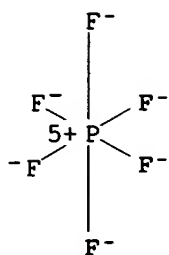
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US 2004-563852P	P	2004 0419
US 2004-565211P	P	2004 0422
US 2004-496231	A2	2004 0520
US 2004-601452P	P	2004 0813
US 2002-104352	A	2002 0322
<-- US 2002-167940	A	2002 0612
<-- US 2003-443892P	P	2003 0130
<-- US 2003-446848P	P	2003 0211
<-- US 2003-502017P	P	2003 0910
<-- US 2004-606340P	P	2004 0901

AB A battery includes an electrolyte activating one or more anodes and one or more cathodes. The electrolyte includes one or more salts and one or more additives in a solvent. The solvent includes a silane or a siloxane. The one or more additives form a passivation layer on at least one of the anodes. In some instances, the additives include vinyl carbonate and/or vinyl ethylene carbonate.

IT 21324-40-3, Lithium hexafluorophosphate
132843-44-8
(battery having electrolyte including one or more additives)

RN 21324-40-3 HCAPLUS

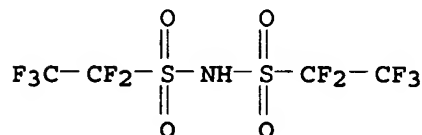
CN Phosphate(1-), hexafluoro-, lithium (8CI, 9CI) (CA INDEX NAME)



● Li⁺

RN 132843-44-8 HCAPLUS

CN Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-
[(pentafluoroethyl)sulfonyl]-, lithium salt (9CI) (CA INDEX NAME)



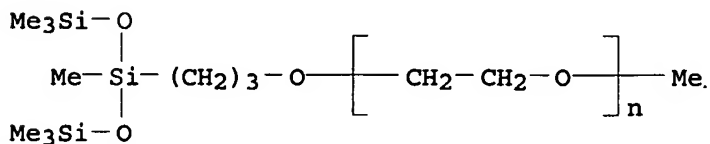
● Li

IT 27306-78-1

(battery having electrolyte including one or more additives)

RN 27306-78-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α-methyl-ω-[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]- (9CI)
(CA INDEX NAME)



IC ICM H01M010-40

ICS H01M002-16

INCL 429324000; 429137000; 429328000; 429330000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

Section cross-reference(s): 38

IT 556-65-0, Lithium thiocyanate 917-54-4,

Lithium methide 7439-93-2, Lithium, uses

7791-03-9, Lithium perchlorate 9002-88-4, Polyethylene

12135-01-2, Lithium imide 14024-11-4, Lithium

tetrachloroaluminate 14283-07-9, Lithium
 tetrafluoroborate 14485-20-2, Lithium
 tetraphenylborate 15955-98-3, Lithium
 tetrachlorogallate 18424-17-4, Lithium
 hexafluoroantimonate 21324-40-3, Lithium
 hexafluorophosphate 27208-14-6, Tetrasiloxane 29935-35-1,
 Lithium hexafluoroarsenate 33454-82-9, Lithium
 triflate 90076-65-6 115028-88-1 132404-42-3
 132843-44-8 193214-24-3, Aluminum cobalt lithium
 nickel oxide (Al_{0.05}Co_{0.15}LiNi_{0.80}O₂) 195144-63-9,
 Lithium oxide (Li₂O) 244761-29-3, Lithium
 bisoxalatoborate 345891-32-9

(battery having electrolyte including one or more additives)

IT 463-79-6D, Carbonic acid, aromatic ester 463-79-6D, Carbonic acid,
 cyclic ester 463-79-6D, Carbonic acid, vinyl ester 513-81-5
 1337-81-1, Vinyl pyridine 1469-73-4, Propylene sulfite
 3741-38-6, Ethylene sulfite 4427-92-3, Phenyl ethylene
 carbonate 4427-96-7, Vinyl ethylene carbonate
 7570-02-7 7803-62-5, Silane, uses 13940-57-3, Trisiloxane
 16761-08-3 27306-78-1 29992-75-4 30676-86-9
 71437-41-7 851904-00-2 851904-03-5

(battery having electrolyte including one or more additives)

IT 7664-38-2D, Phosphoric acid, fluorinated, alkyl ester
 (fluoro, lithium, alkyl; battery having
 electrolyte including one or more additives)

L39 ANSWER 3 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:857824 HCAPLUS

DOCUMENT NUMBER: 141:352740

TITLE: Surfactant-treated lithium
 battery electrodes for improved solid
 electrolyte interface during cycling

INVENTOR(S): Morris, Robert Scott; Dixon, Brian Gilbert

PATENT ASSIGNEE(S): Phoenix Innovations, Inc., USA

SOURCE: PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004088769	A2	20041014	WO 2004-US3750	2004 0209

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WO 2004088769 A3 20050203

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ,
 CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG,
 ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
 KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
 MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL,
 PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
 TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
 RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW,
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY,
 CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,

NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA,
 GN, GQ, GW, ML, MR, NE, SN, TD, TG
 EP 1597783 A2 20051123 EP 2004-709487

2004
 0209

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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE,
 MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ,
 EE, HU, SK

PRIORITY APPLN. INFO.:

US 2003-447500P

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2003
 0219

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WO 2004-US3750

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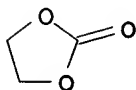
2004
 0209

AB Novel lithium batteries with improved interfacial contact and decreased impedance between the electrolyte and the electrodes, resulting in improved safety (especially to prevent overcharging during cycling) are characterized by having one or both surfactant-modified electrodes, a porous separator, and an electrolyte. The anode is especially a carbon anode (e.g., graphite, mesocarbon microbeads, buckyballs, and multiwall and single-walled carbon nanotubes) that is coated with a fluorinated, nonionic, or cationic surfactant; the cathode is especially a lithium metal oxide (e.g., LiNiCoO₂, LiCoO₂, LiNO₂, and LiMnO₂) coated with a fluorinated, dimeric, cationic, or nonionic surfactant. All the surfactants have an incorporated reactive end group of various reactive functionality (e.g., vinyl, allyl, acrylate, propargyl, diene, polyene, etc). The electrolytes include nonaq. organic electrolytes and can incorporate added lithium salts.

IT 96-49-1, Ethylene carbonate 21324-40-3
 , Lithium hexafluorophosphate 132843-44-8
 (electrolyte containing; surfactant-treated lithium
 battery electrodes for improved solid electrolyte
 interface during cycling)

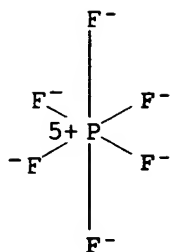
RN 96-49-1 HCAPLUS

CN 1,3-Dioxolan-2-one (9CI) (CA INDEX NAME)

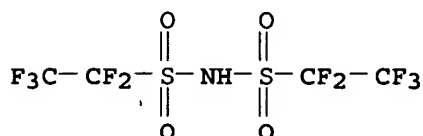


RN 21324-40-3 HCAPLUS

CN Phosphate(1-), hexafluoro-, lithium (8CI, 9CI) (CA INDEX NAME)

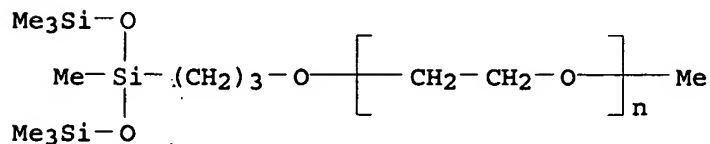
● Li⁺

RN 132843-44-8 HCAPLUS
 CN Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-
 [(pentafluoroethyl)sulfonyl]-, lithium salt (9CI) (CA INDEX NAME)



● Li

IT 27306-78-1, Silwet L 77
 (surfactants; surfactant-treated lithium
 battery electrodes for improved solid electrolyte
 interface during cycling)
 RN 27306-78-1 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α-methyl-ω-[3-[1,3,3,3-
 tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]- (9CI)
 (CA INDEX NAME)



IC ICM H01M
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy
 Technology)
 Section cross-reference(s): 46
 ST solid electrolyte interface lithium battery
 electrode surfactant; surfactant treated anode cathode electrolyte
 interface battery safety; carbon anode surfactant lithium
 battery electrolyte interface
 IT Polysiloxanes, uses
 (Silwet L 7510, surfactants; surfactant-treated lithium

- battery electrodes for improved solid electrolyte interface during cycling)**
- IT Surfactants
(anionic; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Fullerenes
(anodes; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Nanotubes
(carbon, single-walled and multiwalled; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Surfactants
(cationic; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Polysiloxanes, uses
(di-Me, 3-hydroxypropyl Me, ethers with polyethylene glycol mono-Me ether, Silwet L 7602 and Silwet L 7622; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Polysiloxanes, uses
(di-Me, 3-hydroxypropyl Me, ethers with polyethylene-polypropylene glycol mono-Me ether, Silwet L 7001 and Silwet L 7605; surfactants; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Polysiloxanes, uses
(di-Me, 3-hydroxypropyl Me, ethoxylated propoxylated, Silwet L 7280 and Silwet L 7607; surfactants; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Polysiloxanes, uses
(di-Me, 3-hydroxypropyl Me, ethoxylated, Silwet L 7608; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Polyoxyalkylenes, uses
(di-Me, Me hydrogen polysiloxane-, Silwet L 7600, surfactants; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Polysiloxanes, uses
(di-Me, Me hydrogen, polyoxyalkylene-, Silwet L 7600, surfactants; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Polysiloxanes, uses
(di-Me, hydroxyalkyl Me, ethers with polyalkylene glycol mono-C1-3-alkyl ether, Silwet L 7500, surfactants; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Polysiloxanes, uses
(di-Me, hydroxypropyl Me, ethers with polyoxyalkylene glycol mono-C1-3-alkyl ether, Silwet L 7604, surfactants; surfactant-treated **lithium battery**

- electrodes for improved solid electrolyte interface during cycling)
- IT Polyphosphates
(electrolyte containing; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Glycols, uses
(ethers, alkyl and aryl ethers, surfactants; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Surfactants
(fluorosurfactants; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Ethers, uses
(glycol, alkyl and aryl ethers, surfactants; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Safety
(in battery cycling; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Microspheres
(mesocarbon; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Surfactants
(nonionic; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Polysiloxanes, uses
(polyoxyalkylene-, surfactants; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Polyoxyalkylenes, uses
(polysiloxane-, surfactants; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Carboxylic acids, uses
Sulfonic acids, uses
(salts, surfactants; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Battery anodes
Battery cathodes
Battery electrodes
Electrode-electrolyte interface
Surfactants
(surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Polyoxyalkylenes, uses
(surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)
- IT Phosphonium compounds
Polyoxyarylenes
Quaternary ammonium compounds, uses
(surfactants; surfactant-treated **lithium battery** electrodes for improved solid electrolyte interface during cycling)

interface during cycling)

IT 9002-92-0
(Brij 30 and Brij 35, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 9004-95-9
(Brij 52 and Brij 58, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 9005-00-9
(Brij 700, Brij 72, Brij 76; surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 9004-98-2
(Brij 92, Brij 97, Brij 98; surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 112-34-5
(Dowanol DB, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 111-77-3
(Dowanol DM, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 34590-94-8
(Dowanol DPM, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 88917-22-0
(Dowanol DPMA, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 35884-42-5
(Dowanol DPNB, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 29911-27-1
(Dowanol DPNP, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 111-76-2
(Dowanol EB, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 122-99-6
(Dowanol EPH, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 1320-67-8
(Dowanol PM, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 29387-86-8
(Dowanol PNB, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

IT 30136-13-1
(Dowanol PNP, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

- interface during cycling)
- IT 41593-38-8
(Dowanol PPH, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)
- IT 25498-49-1
(Dowanol TPM, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)
- IT 55934-93-5
(Dowanol TPNB, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)
- IT 9002-93-1
(Triton X 100 and Triton X 114, surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)
- IT 7440-44-0, Carbon, uses 7782-42-5, Graphite, uses (anodes; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)
- IT 12031-65-1, Lithium nickel oxide (LiNiO₂) 12162-79-7, Lithium manganese oxide (LiMnO₂) 12190-79-3, Cobalt lithium oxide (CoLiO₂) 162004-08-2, Cobalt lithium nickel oxide ((Co,Li,Ni)O₂) (cathodes; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)
- IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 108-32-7, Propylene carbonate 123-91-1, 1,4-Dioxane, uses 126-33-0, Sulfolane 512-56-1, Trimethyl phosphate 616-38-6, Dimethyl carbonate 623-53-0, Ethyl methyl carbonate 756-79-6, Dimethyl methyl phosphonate 872-36-6, Vinylene carbonate 7791-03-9, Lithium perchlorate 13598-36-2D, Phosphonic acid, polymers 14283-07-9, Lithium tetrafluoroborate 21324-40-3, Lithium hexafluorophosphate 25322-68-3, Polyethylene glycol 25322-69-4, Polypropylene glycol 29935-35-1, Lithium hexafluoroarsenate 33454-82-9, Lithium trifluoromethanesulfonate 132843-44-8 288570-49-0 (electrolyte containing; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)
- IT 57-09-0, Cetyltrimethylammonium bromide 112-02-7, Cetyltrimethylammonium chloride 151-21-3, Sodium dodecylsulfate, uses 7664-38-2D, Phosphoric acid, salts 13598-36-2D, Phosphonic acid, derivs., salts 27306-78-1, Silwet L 77 67674-67-3 166949-53-7 193487-14-8, Silwet 560 296241-24-2, Silwet 806 (surfactants; surfactant-treated lithium battery electrodes for improved solid electrolyte interface during cycling)

L39 ANSWER 4 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:824976 HCAPLUS

DOCUMENT NUMBER: 141:334897

TITLE: Electrolyte for rechargeable lithium battery

INVENTOR(S): Jung, Cheol-Soo; Yamaguchi, Takitaro; Shimizu,

PATENT ASSIGNEE(S): Ryuichi
 SOURCE: S. Korea
 U.S. Pat. Appl. Publ., 38 pp.
 CODEN: USXXCO
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004197668	A1	20041007	US 2004-754453	2004 0109
JP 2004235141	A2	20040819	JP 2003-363591	2003 1023
PRIORITY APPLN. INFO.:			JP 2003-3047	A 2003 0109
			JP 2003-363591	A 2003 1023
			KR 2003-97895	A 2003 1226

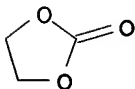
OTHER SOURCE(S): MARPAT 141:334897

AB Disclosed is a non-aqueous electrolyte for a rechargeable lithium battery including a polyether-modified silicon oil in which a polyether chain is bonded to a terminal end of a linear polysiloxane, a cyclic carbonate, and a lithium salt.

IT 96-49-1, Ethylene carbonate 7439-93-2D
 , Lithium, salt 21324-40-3,
 Lithium hexafluorophosphate 132843-44-8,
 Lithium bis(pentafluoroethanesulfonyl) amide
 741700-68-5
 (electrolyte for rechargeable lithium battery
)

RN 96-49-1 HCAPLUS

CN 1,3-Dioxolan-2-one (9CI). (CA INDEX NAME)

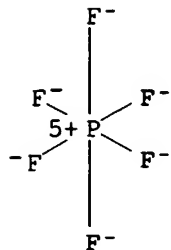


RN 7439-93-2 HCAPLUS

CN Lithium (7CI, 8CI, 9CI) (CA INDEX NAME)

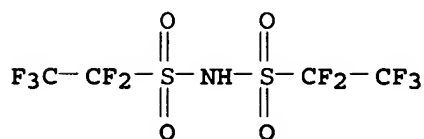
Li

RN 21324-40-3 HCAPLUS
 CN Phosphate(1-), hexafluoro-, lithium (8CI, 9CI) (CA INDEX NAME)



● Li⁺

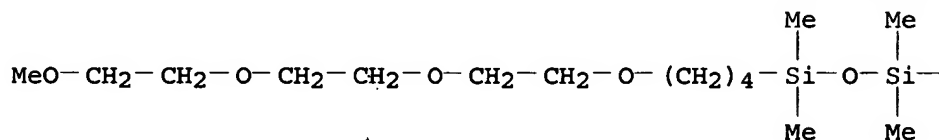
RN 132843-44-8 HCAPLUS
 CN Ethanesulfonamide, 1,1,2,2,2-pentafluoro-N-
 [(pentafluoroethyl)sulfonyl]-, lithium salt (9CI) (CA INDEX NAME)



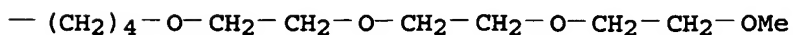
● Li

RN 741700-68-5 HCAPLUS
 CN 2,5,8,11,17,23,26,29,32-Nonaoxa-16,18-disilatritriacontane,
 16,16,18,18-tetramethyl- (9CI) (CA INDEX NAME)

PAGE 1-A



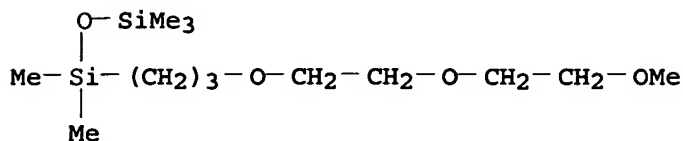
PAGE 1-B



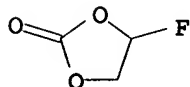
IT 17065-99-5 114435-02-8, Fluoroethylene
 carbonate 741700-72-1

(electrolyte for rechargeable lithium battery
)

RN 17065-99-5 HCAPLUS
CN 3,8,11,14-Tetraoxa-2,4-disilapentadecane, 2,2,4,4-tetramethyl-
(9CI) (CA INDEX NAME)

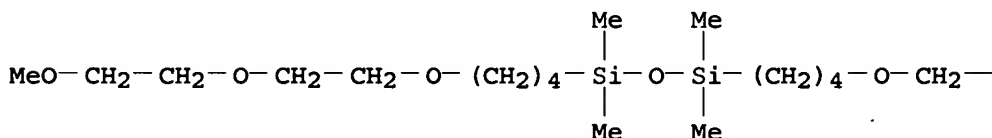


RN 114435-02-8 HCAPLUS
CN 1,3-Dioxolan-2-one, 4-fluoro- (9CI) (CA INDEX NAME)



RN 741700-72-1 HCAPLUS
CN 2,5,8,14,20,23,26-Hepta-oxa-13,15-disilaheptacosane,
13,13,15,15-tetramethyl- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



IC ICM H01M010-40
ICS H01M002-16
INCL 429330000; 429332000; 429137000; 429246000; 429200000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy
Technology)
Section cross-reference(s): 38
ST electrolyte rechargeable lithium battery
IT Battery electrolytes
(electrolyte for rechargeable lithium battery
)
IT Secondary batteries
(lithium; electrolyte for rechargeable
lithium battery)
IT Polysiloxanes, uses
(polyether-; electrolyte for rechargeable lithium
battery)

IT Polyethers, uses
(siloxane-; electrolyte for rechargeable lithium battery)

IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl carbonate 463-79-6D, Carbonic acid, cyclic ester 7439-93-2D, Lithium, salt 21324-40-3, Lithium hexafluorophosphate 132843-44-8, Lithium bis(pentafluoroethanesulfonyl)amide 741700-68-5 (electrolyte for rechargeable lithium battery)

IT 151-56-4D, Aziridine, compound 463-79-6D, Carbonic acid, cyclic ester, fluorinated 463-79-6D, Carbonic acid, ester, chain 17065-99-5 49717-87-5, 2-Propenoic acid, ion(1-), homopolymer, uses 57116-45-7 93365-34-5 114435-02-8, Fluoroethylene carbonate 741700-72-1 (electrolyte for rechargeable lithium battery)

L39 ANSWER 5 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2004:680808 HCAPLUS
 DOCUMENT NUMBER: 141:210080
 TITLE: Nonaqueous electrolyte containing polyether-modified silicone oil and cyclic carbonate and lithium secondary battery with improved thermal stability
 INVENTOR(S): Yamaguchi, Takitaro; Shimizu, Ryuichi
 PATENT ASSIGNEE(S): Samsung SDI Co., Ltd., S. Korea
 SOURCE: Jpn. Kokai Tokkyo Koho, 28 pp. CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004235141	A2	20040819	JP 2003-363591	2003 1023
US 2004197668	A1	20041007	US 2004-754453	2004 0109
CN 1567643	A	20050119	CN 2004-10005817	2004 0109
PRIORITY APPLN. INFO.:			JP 2003-3047	A 2003 0109
			JP 2003-363591	A 2003 1023
			KR 2003-97895	A

2003
1226

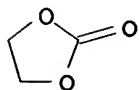
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AB Disclosed is the nonaq. electrolyte comprising a polyether-modified silicone oil, a cyclic carbonate, and a solute. The polyether-modified silicone oil has the viscosity <10 cSt at 25°, and the flash point ≥120°.

IT 96-49-1, Ethylene carbonate
(nonaq. electrolyte containing polyether-modified silicone oil and cyclic carbonate for lithium secondary battery)

RN 96-49-1 HCAPLUS

CN 1,3-Dioxolan-2-one (9CI) (CA INDEX NAME)

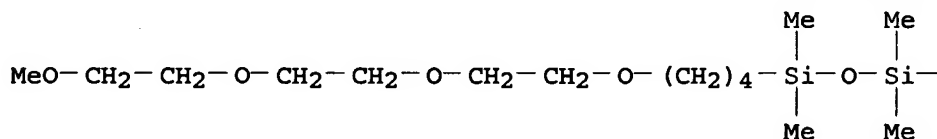


IT 741700-68-5 741700-69-6 741700-71-0
741700-72-1 741700-73-2
(nonaq. electrolyte containing polyether-modified silicone oil and cyclic carbonate for lithium secondary battery)

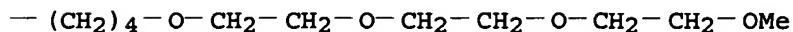
RN 741700-68-5 HCAPLUS

CN 2,5,8,11,17,23,26,29,32-Nonaoxa-16,18-disilatritriacontane, 16,16,18,18-tetramethyl- (9CI) (CA INDEX NAME)

PAGE 1-A

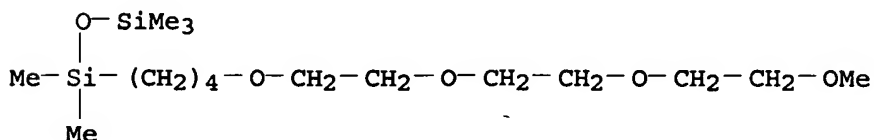


: PAGE 1-B



RN 741700-69-6 HCAPLUS

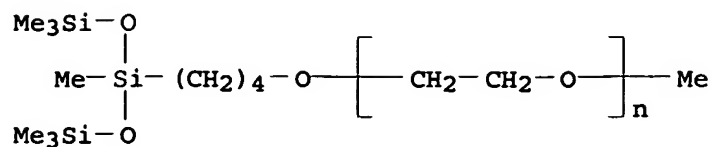
CN 3,9,12,15,18-Pentaoxa-2,4-disilanonadecane, 2,2,4,4-tetramethyl- (9CI) (CA INDEX NAME)



RN 741700-71-0 HCAPLUS

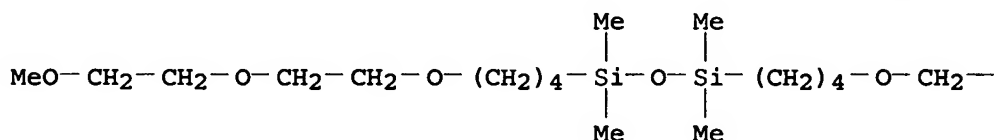
CN Poly(oxy-1,2-ethanediyl), α-methyl-ω-[4-[1,3,3,3-

tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]butoxy] - (9CI) (CA INDEX NAME)



RN 741700-72-1 HCAPLUS
CN 2,5,8,14,20,23,26-Heptaoxa-13,15-disilaheptacosane,
13,13,15,15-tetramethyl- (9CI) (CA INDEX NAME)

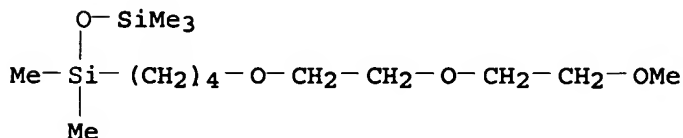
PAGE 1-A



PAGE 1-B



RN 741700-73-2 HCAPLUS
CN 3,9,12,15-Tetraoxa-2,4-disilahexadecane, 2,2,4,4-tetramethyl-
(9CI) (CA INDEX NAME)



IC ICM H01M010-40
ICS H01M006-16
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 38
ST nonaq electrolyte polyether silicone oil cyclic carbonate
; lithium secondary battery
IT Secondary batteries
(lithium; nonaq. electrolyte containing
polyether-modified silicone oil and cyclic carbonate
for lithium secondary battery)
IT Battery electrolytes
(nonaq. electrolyte containing polyether-modified silicone oil and
cyclic carbonate for lithium secondary
battery)
IT 96-49-1, Ethylene carbonate 105-58-8, Diethyl

carbonate

(nonaq. electrolyte containing polyether-modified silicone oil and cyclic carbonate for lithium secondary battery)

IT 741700-68-5 741700-69-6 741700-71-0
741700-72-1 741700-73-2

(nonaq. electrolyte containing polyether-modified silicone oil and cyclic carbonate for lithium secondary battery)

L39 ANSWER 6 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2003:678915 HCAPLUS

DOCUMENT NUMBER: 139:216453

TITLE: Heat transfer compositions with high electrical resistance for fuel cell assemblies

INVENTOR(S): Jeffcoate, Carol S.; Gershun, Aleksei V.; Woyciesjes, Peter M.; Marinho, Filipe J.

PATENT ASSIGNEE(S): USA

SOURCE: PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003070854	A1	20030828	WO 2003-US4914	2003 0219

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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003225581	A1	20030909	AU 2003-225581	2003 0219
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US 2003198847	A1	20031023	US 2003-370170	2003 0219
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EP 1476524	A1	20041117	EP 2003-742823	2003 0219
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JP 2005517796	T2	20050616	JP 2003-569754
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2003
0219

CN 1646659

A

20050727

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CN 2003-8084152003
0219

PRIORITY APPLN. INFO.:

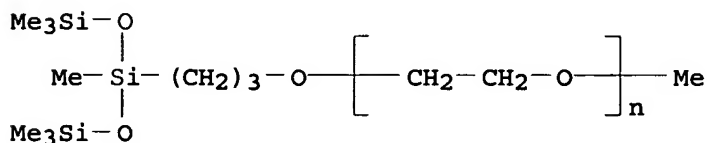
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US 2002-358201P P2002
0219<--
WO 2003-US4914 W2003
0219

AB The heat transfer compns. with high elec. resistance for use in power-generating equipment or in engines comprises 0-90 weight% alc., 0-90 weight% polyalkylene oxide, 0-50 weight% additive, and balance water. Such compns. are particularly useful in fuel cell assemblies.

IT 27306-78-1, Silwet L-77
(heat transfer compns. with high elec. resistance for fuel cell assemblies)

RN 27306-78-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy] - (9CI)
(CA INDEX NAME)



IC ICM C09K005-10

ICS H01M008-02

CC 48-5 (Unit Operations and Processes)

Section cross-reference(s): 51, 52

IT 75-56-9, Oxypropylene, uses 97-99-4, Tetrahydrofurfuryl alcohol
9003-13-8, UCON LB-165 9016-00-6, Syltherm XLT 25322-68-3
25322-69-4, P 425 26249-20-7D, Butylene oxide, polymers
27306-78-1, Silwet L-77 39464-69-2, Lubrhophos LB-400
42557-10-8 62563-36-4, Deriphath 151C 69226-89-7, UCON LB-135
164325-85-3, Mazon RI-4a 168042-04-4, Rhodafac PL-6
587846-83-1, Ucon LB 165Y24 587846-84-2, Ucon LB 165Y3
587847-11-8, Ucon 1281 587847-42-5, Ucon H 1400 587847-55-0,
Ucon HTF 500 587847-73-2, Ucon 50HB260Y3 587848-23-5, Formasil
433 587848-24-6, Formasil 891 587848-36-0, Silwet L 7650
587848-50-8, Silwet L 7664 587848-63-3, Silwet L 8600
587848-67-7, Silwet L 8620 587854-21-5, TBF 190 587854-22-6,
TBA 4456 587854-51-1, TBF 193 587854-52-2, TBF 77A
587854-53-3, Miramine TO-DT 587854-58-8, Rhodafac PA 32
587854-69-1, Lubrophos RD 510 587854-77-1, Ucon HB 260
(heat transfer compns. with high elec. resistance for fuel cell assemblies)

REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L39 ANSWER 7 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2003:628366 HCAPLUS
 DOCUMENT NUMBER: 139:166945
 TITLE: Compositions for electrolytes, electrolytes,
 their manufacture, and their use in batteries
 INVENTOR(S): Noda, Kazuhiro; Horie, Takeshi; Yasuda,
 Toshikazu
 PATENT ASSIGNEE(S): Sony Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 22 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003229019	A2	20030815	JP 2002-23959	2002 0131

PRIORITY APPLN. INFO.: JP 2002-23959
 2002
 0131

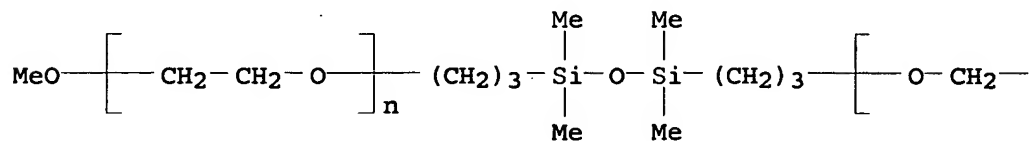
AB The compns. comprise crosslinkable primary compds., secondary compds., and tertiary compds. having higher mol. weight than the secondary compds. The electrolytes are manufactured by crosslinking the primary compds. in the above compns. after or before mixing the compns. with electrolyte salts. Preferably, the secondary compds. and the tertiary compds. resp. form semi-interpenetrating polymer networks with the crosslinked primary compound polymers, and the tertiary compound-derived crosslinked polymers form interpenetrating polymer networks with the crosslinked primary compound polymers to improve elasticity of the electrolytes. The electrolytes show high film formability, ion conductivity, and elasticity and give high-performance batteries with high flexibility.

IT 527950-44-3
 (crosslinkable compound-containing compns. forming (semi-)interpenetrating polymer networks for battery electrolytes with high film formability, ion conductivity, and elasticity)

RN 527950-44-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α, α' -[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)di-3,1-propanediyl]bis[ω -methoxy- (9CI)
 (CA INDEX NAME)

PAGE 1-A

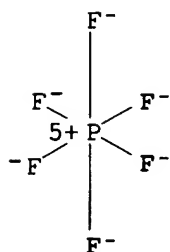


$$\text{---CH}_2\text{---}\left[\text{---CH}_2\text{---} \right]_n \text{OMe}$$

L39 ANSWER 8 OF 18- HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:551208 HCAPLUS
DOCUMENT NUMBER: 139:101535
TITLE: Production of oxyalkylene-containing
acrylate-terminated polysiloxane crosslinking
agents
INVENTOR(S): Kang, Yongku; Lee, Changjin; Lee, Won-Sil;
Noh, Kun Ae
PATENT ASSIGNEE(S): Korea Research Institute of Chemical
Technology, S. Korea
SOURCE: U.S. Pat. Appl. Publ., 18 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

USHA SHRESTHA EIC 1700 REM 4B28

- <--
- AB A crosslinking agent comprises Me siloxane polymer backbone, a poly(alkylene oxide) branches and from 2 to 4 of acrylate groups at both terminals. A solid polymer electrolyte composition comprises (a) 0.1-80% of the crosslinking agent, (b) 0.1-80% of a plasticizer selected from poly(alkylene glycol) dialkyl ethers and non-aqueous polar solvents, (c) 3-30% of a lithium salt, and (d) 0.5-5% of a curing initiator. The crosslinkable solid polymer electrolyte composition has a high ionic conductivity at room temperature and can be readily formed into a film suitable for use in large-size lithium-polymer secondary batteries applicable to elec. cars, power storage devices for power leveling, as well as in small-size lithium-polymer secondary batteries applicable to video cameras and portable data terminals, such as cellular phones and notebook computers. Thus, tri(ethylene glycol) allyl Me ether was hydrosilylated with 2,4,6,8-tetramethylcyclotetrasiloxane in the presence of a platinum catalyst producing tetrafunctional tri(ethylene glycol)-substituted D4 monomer in 97.4% yield. The monomer was polymerized in the presence of 1,3-di(3-acryloyloxypropyl)-1,1,3,3-tetramethyldisiloxane terminating agent and sulfuric acid to obtain a polyoxyethylene-grafted acryloyloxy-terminated polysiloxane used as a crosslinkable component in solid polymer electrolyte compns.
- IT 21324-40-3, Lithium hexafluorophosphate
(oxyalkylene-containing acrylate-terminated polysiloxanes used in compns. for lithium secondary batteries)
- RN 21324-40-3 HCAPLUS
- CN Phosphate(1-), hexafluoro-, lithium (8CI, 9CI) (CA INDEX NAME)



● Li⁺

- IT 7439-93-2D, Lithium, salts
(oxyalkylene-containing acrylate-terminated polysiloxanes used in compns. for lithium secondary batteries)
- RN 7439-93-2 HCAPLUS
- CN Lithium (7CI, 8CI, 9CI) (CA INDEX NAME)

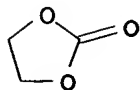
Li

- IT 96-49-1, Ethylene carbonate
(plasticizer; oxyalkylene-containing acrylate-terminated polysiloxanes used in compns. for lithium secondary

batteries)

RN 96-49-1 HCAPLUS

CN 1,3-Dioxolan-2-one (9CI) (CA INDEX NAME)



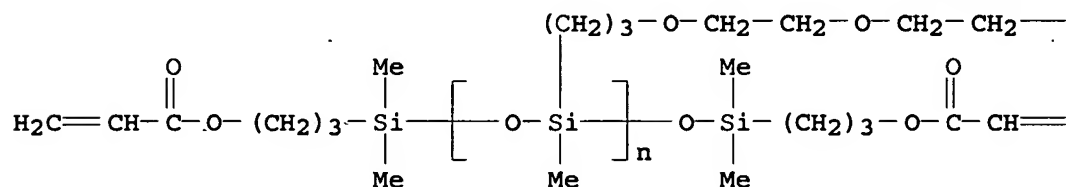
IT 561065-51-8P 561065-53-0P

(production of oxyalkylene-containing acrylate-terminated polysiloxane crosslinking agents)

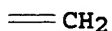
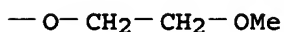
RN 561065-51-8 HCAPLUS

CN Poly[oxy(1-methyl-5,8,11,14-tetraoxa-1-silapentadec-1-ylidene)],
 α -[dimethyl[3-[(1-oxo-2-propenyl)oxy]propyl]silyl]- ω -
 [[dimethyl[3-[(1-oxo-2-propenyl)oxy]propyl]silyl]oxy]- (9CI) (CA
 INDEX NAME)

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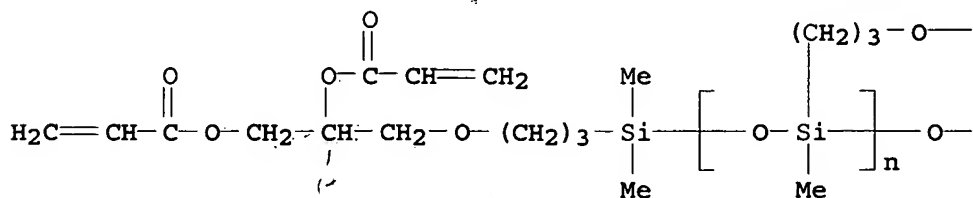
PAGE 1-B



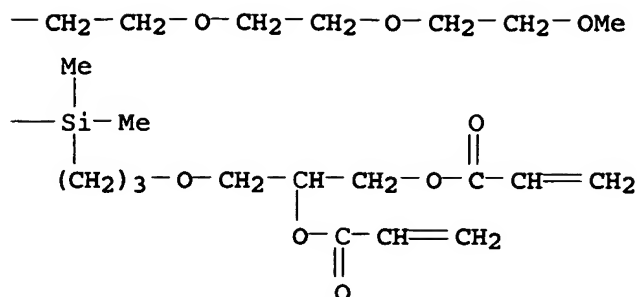
RN 561065-53-0 HCAPLUS

CN Poly[oxy(1-methyl-5,8,11,14-tetraoxa-1-silapentadec-1-ylidene)],
 α -[[3-[2,3-bis[(1-oxo-2-propenyl)oxy]propoxy]propyl]dimethyl
 silyl]- ω -[[[3-[2,3-bis[(1-oxo-2-
 propenyl)oxy]propoxy]propyl]dimethylsilyl]oxy]- (9CI) (CA INDEX
 NAME)

PAGE 1-A



PAGE 1-B



IC ICM C08F008-00

INCL 524588000

CC 35-3 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 52

ST acrylate terminated polyoxyalkylene graft polysiloxane crosslinking agent; **lithium salt** acrylate terminated polyoxyalkylene polysiloxane solid electrolyte; solid polymer ionic conductor **lithium secondary battery**

IT Polysiloxanes, preparation
(acrylate-terminated; oxyalkylene-containing acrylate-terminated polysiloxane crosslinking agents for use in **lithium secondary batteries**)

IT Polyoxyalkylenes, uses
(alkyl group-terminated, dialkyl, plasticizers; oxyalkylene-containing acrylate-terminated polysiloxanes used in compns. for **lithium secondary batteries**)

IT Plastic films
(from solid electrolytes based on **lithium salts** and oxyalkylene-containing acrylate-terminated polysiloxanes)

IT Secondary **batteries**
(**lithium**; oxyalkylene-containing acrylate-terminated polysiloxane crosslinking agents for use in **lithium secondary batteries**)

IT Polar solvents
(non-aqueous, plasticizers; oxyalkylene-containing acrylate-terminated polysiloxanes used in compns. for **lithium secondary batteries**)

IT Crosslinking agents
(oxyalkylene-containing acrylate-terminated polysiloxane crosslinking agents for use in **lithium secondary batteries**)

IT Plasticizers
Polymerization catalysts
(oxyalkylene-containing acrylate-terminated polysiloxanes used in compns. for **lithium secondary batteries**)

IT Polysiloxanes, preparation
(polyoxyalkylene-, graft; oxyalkylene-containing acrylate-terminated polysiloxane crosslinking agents for use in **lithium secondary batteries**)

IT Polysiloxanes, preparation
(polyoxyethylene-, graft; oxyalkylene-containing acrylate-terminated polysiloxane crosslinking agents for use in **lithium secondary batteries**)

- IT Polyoxyalkylenes, preparation
(polysiloxane-, graft; oxyalkylene-containing acrylate-terminated polysiloxane crosslinking agents for use in lithium secondary batteries)
- IT Ionic conductors
Solid electrolytes
(solid electrolytes based on lithium salts and oxyalkylene-containing acrylate-terminated polysiloxanes)
- IT 301663-77-4
(oxyalkylene-containing acrylate-terminated polysiloxanes used in compns. for lithium secondary batteries)
- IT 21324-40-3, Lithium hexafluorophosphate
33454-82-9, Lithium trifluoromethanesulfonate
(oxyalkylene-containing acrylate-terminated polysiloxanes used in compns. for lithium secondary batteries)
- IT 7439-93-2D, Lithium, salts
7791-03-9, Lithium perchlorate 14283-07-9,
Lithium tetrafluoroborate 29935-35-1, Lithium
hexafluoroarsenate 90076-65-6, Lithium
bis(trifluoromethylsulfonyl)imide
(oxyalkylene-containing acrylate-terminated polysiloxanes used in compns. for lithium secondary batteries)
- IT 24991-55-7, Poly(ethylene glycol) dimethyl ether
(plasticizer; oxyalkylene-containing acrylate-terminated polysiloxanes used in compns. for lithium secondary batteries)
- IT 96-49-1, Ethylene carbonate 108-32-7,
Propylene carbonate
(plasticizer; oxyalkylene-containing acrylate-terminated polysiloxanes used in compns. for lithium secondary batteries)
- IT 561065-50-7DP, acryloyloxy-terminated 561065-51-8P
561065-52-9DP, acryloyloxy-terminated 561065-53-0P
561065-55-2DP, acryloyloxy-terminated
(production of oxyalkylene-containing acrylate-terminated polysiloxane crosslinking agents)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L39 ANSWER 9 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:531549 HCAPLUS
DOCUMENT NUMBER: 139:103723
TITLE: Polymer solid electrolyte and battery
INVENTOR(S): Miura, Katsuhito; Murakami, Satoshi; Tabuchi, Masato; Nakamura, Seiji
PATENT ASSIGNEE(S): Daiso Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	----	-----	-----	
JP 2003197030	A2	20030711	JP 2001-392067	2001 1225

PRIORITY APPLN. INFO.:

<--
JP 2001-3920672001
1225

AB The electrolyte, especially for a secondary lithium battery, contains a polyether copolymer, having a siloxane bond in its side chain, and an electrolyte salt compound. The battery has the above electrolyte, a cathode, and an anode.

IT 558474-55-8

(electrolytes containing crosslinked ether copolymers for secondary lithium batteries)

RN 558474-55-8 HCAPLUS

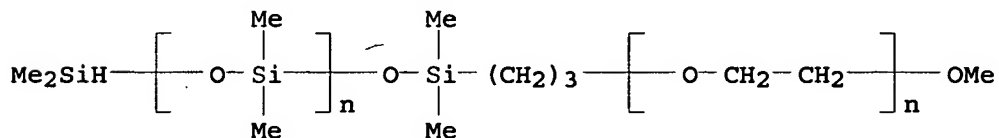
CN Poly[oxy(dimethylsilylene)], α -(dimethylsilyl)- ω -[(dimethylsilyl)oxy]-, polymer with α -(dimethylsilyl)- ω -[[[(3-hydroxypropyl)dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] ether with α -hydro- ω -methoxypoly(oxy-1,2-ethanediyl), oxirane, [(2-propenyloxy)methyl]oxirane and 2,5,8,11-tetraoxadodec-1-yloxirane (9CI) (CA INDEX NAME)

CM 1

CRN 524938-89-4

CMF (C2 H6 O Si)n (C2 H4 O)n C8 H22 O2 Si2

CCI PMS

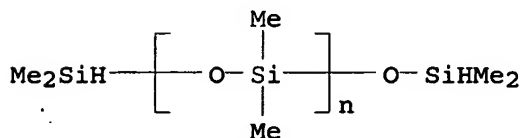


CM 2

CRN 115254-29-0

CMF (C2 H6 O Si)n C4 H14 O Si2

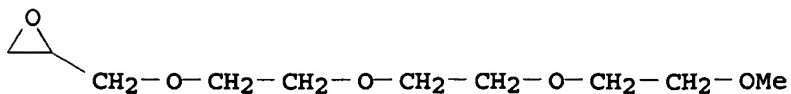
CCI PMS



CM 3

CRN 73692-54-3

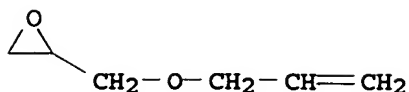
CMF C10 H20 O5



CM 4

CRN 106-92-3

CMF C6 H10 O2



CM 5

CRN 75-21-8

CMF C2 H4 O

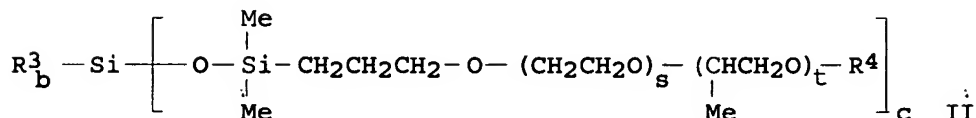
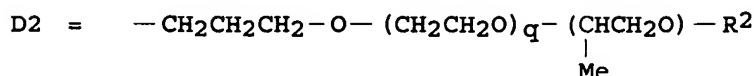
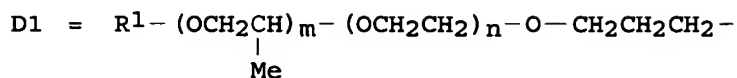
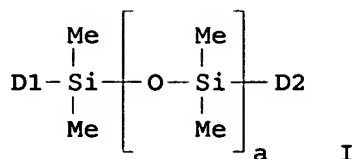


IC ICM H01B001-06
 ICS C08G065-336; C08K003-00; C08L071-02; H01M010-40
 CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
 ST secondary lithium battery electrolyte
 polyether polymer oxirane compd
 IT Battery electrolytes
 (electrolytes containing crosslinked ether copolymers for secondary lithium batteries)
 IT Polyethers, uses
 (electrolytes containing crosslinked ether copolymers for secondary lithium batteries)
 IT Secondary batteries
 (lithium; electrolytes containing crosslinked ether copolymers for secondary lithium batteries)
 IT 7439-93-2, Lithium, uses
 (anode; electrolytes containing crosslinked ether copolymers for secondary lithium batteries)
 IT 108-32-7, Propylene carbonate 12190-79-3, Cobalt
 lithium oxide (CoLiO2) 90076-65-6 558474-53-6
 558474-55-8
 (electrolytes containing crosslinked ether copolymers for secondary lithium batteries)

L39 ANSWER 10 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2003:374045 HCAPLUS
 DOCUMENT NUMBER: 138:388152
 TITLE: Electrolyte and battery using the electrolyte
 INVENTOR(S): Horie, Takeshi
 PATENT ASSIGNEE(S): Sony Corp., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO. -----	KIND ----	DATE -----	APPLICATION NO. -----	DATE
JP 2003142157	A2	20030516	JP 2001-334952	2001 1031
PRIORITY APPLN. INFO.:			<-- JP 2001-334952	2001 1031
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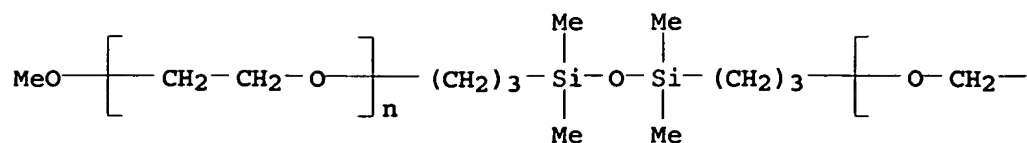
AB The electrolyte, especially for a secondary lithium battery, contains a siloxane derivative I (a = integer 1-50; m,n,q = integer 0-40; R¹,R² = H, alkyl, or halogen-substituted alkyl group) or II [b = integer 1-3; c = integer 1-4; (b+c) = 4; s,t = integer 0-40; R³ = Me; R⁴ = H, alkyl, or halogen-substituted alkyl group], and an electrolyte salt. The battery has a cathode, an anode, and the above electrolyte.

IT 527950-44-3 527950-48-7 527950-54-5
(electrolytes containing siloxane derivs. for secondary lithium batteries)

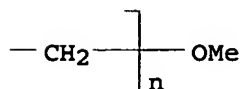
RN 527950-44-3 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α,α'-[(1,1,3,3-tetramethyl-1,3-disiloxanediyl)di-3,1-propanediyl]bis[ω-methoxy- (9CI)
(CA INDEX NAME)

PAGE 1-A



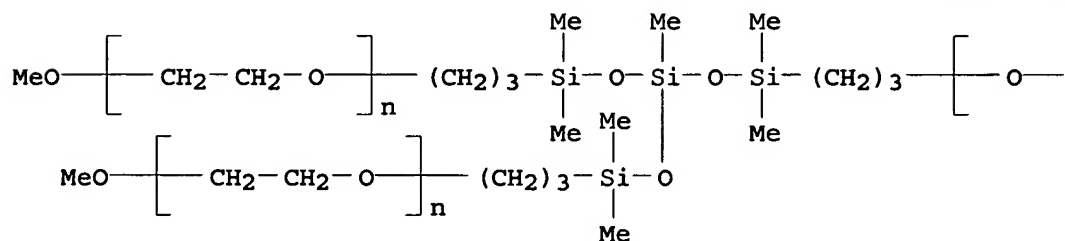
PAGE 1-B



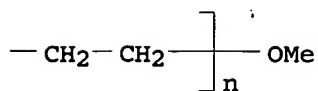
RN 527950-48-7 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -methoxy-, ether
 with 3,3'-[3-[[[(3-hydroxypropyl)dimethylsilyl]oxy]-1,1,3,5,5-pentamethyl-1,5-trisiloxanediyl]bis[1-propanol] (3:1) (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RN 527950-54-5 HCAPLUS

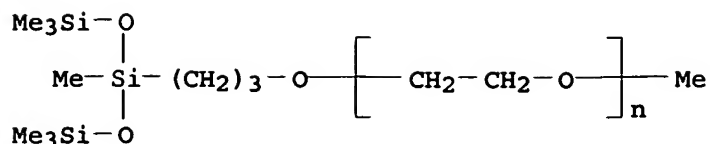
CN Poly(oxy-1,2-ethanediyl), α -hydro- ω -methoxy-, ether
 with 3,3'-[3,3-bis[[[(3-hydroxypropyl)dimethylsilyl]oxy]-1,1,5,5-tetramethyl-1,5-trisiloxanediyl]bis[1-propanol] (4:1) (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{MeO}-\left[\text{CH}_2-\text{CH}_2-\text{O}\right]_n-(\text{CH}_2)_3-\overset{\text{Me}}{\underset{\text{Me}}{\text{Si}}}-\text{O} \\ \text{MeO}-\left[\text{CH}_2-\text{CH}_2-\text{O}\right]_n-(\text{CH}_2)_3-\overset{\text{Me}}{\underset{\text{Me}}{\text{Si}}}-\text{O}-\overset{\text{Me}}{\underset{\text{Me}}{\text{Si}}}-\text{O}-\overset{\text{Me}}{\underset{\text{Me}}{\text{Si}}}-(\text{CH}_2)_3-\left[\text{O}-\right]_m \\ \text{MeO}-\left[\text{CH}_2-\text{CH}_2-\text{O}\right]_n-(\text{CH}_2)_3-\overset{\text{Me}}{\underset{\text{Me}}{\text{Si}}}-\text{O} \end{array}$$
$$\text{---CH}_2\text{---CH}_2\text{---}\left[\begin{array}{c} | \\ \text{---} \end{array} \right]_n \text{OMe}$$

USHA SHRESTHA EIC 1700 REM 4B28

DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002016535	A2	20020228	WO 2001-US25896	2001 0817
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WO 2002016535	A3	20020606		
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CA 2417740	AA	20020228	CA 2001-2417740	2001 0817
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AU 2001088306	A5	20020304	AU 2001-88306	2001 0817
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US 2002115581	A1	20020822	US 2001-932708	2001 0817
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US 6803034	B2	20041012		
PRIORITY APPLN. INFO.:				
			US 2000-226742P	P 2000 0818
<--				
			WO 2001-US25896	W 2001 0817
<--				
AB	Soiling and staining agent-free sprayable compns. for ballistic fabrics and other protective garments contain ≥ 1 of a deodorant [e.g., cyclodextrin (derivs.)] and a fungicide and ≥ 1 of silicone, wrinkle control agent (such as polymers, saccharide, Li salts, and lubricants), surfactant, perfume, and additives.			
IT	27306-78-1, Silwet L77 (compns. and methods for odor and fungal control in ballistic fabric and other protective garments)			
RN	27306-78-1 HCAPLUS			
CN	Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]- (9CI) (CA INDEX NAME)			



IT 7439-93-2D, Lithium, salts
 (creaseproofing agents; compns. and methods for odor and fungal control in ballistic fabric and other protective garments)
 RN 7439-93-2 HCAPLUS
 CN Lithium (7CI, 8CI, 9CI) (CA INDEX NAME)

Li

IC ICM C11D
 CC 46-5 (Surface Active Agents and Detergents)
 ST deodorant fungicide sprayable compn ballistic garment; lubricant
 wrinkle control agent sprayable compn ballistic garment;
 lithium salt wrinkle control agent sprayable
 compn ballistic garment; saccharide wrinkle control agent sprayable
 compn ballistic garment; perfume sprayable compn ballistic
 garment; wrinkle control agent polymer sprayable compn ballistic
 garment; surfactant sprayable compn ballistic garment; silicone
 cyclodextrin sprayable compn; protective garment cyclodextrin
 sprayable compn
 IT 12619-70-4, Cyclodextrin 27306-78-1, Silwet L77
 31692-79-2, DC 2-1865
 (compns. and methods for odor and fungal control in ballistic
 fabric and other protective garments)
 IT 7439-93-2D, Lithium, salts
 (creaseproofing agents; compns. and methods for odor and fungal
 control in ballistic fabric and other protective garments)

L39 ANSWER 12 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:101049 HCAPLUS

DOCUMENT NUMBER: 136:152853

TITLE: Hydrophilic treatment compositions for fin
 materials for heat exchangers

INVENTOR(S): Moroboshi, Koichi; Murata, Masahiro; Matsuda,
 Hideki; Haruta, Yasuhiko

PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2002038134	A2	20020206	JP 2000-163003	2000 0531

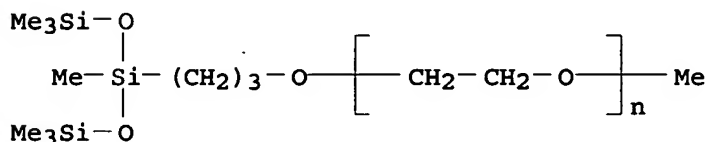
PRIORITY APPLN. INFO.:

<--
 JP 2000-145771 A

2000
0517

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- AB Coating materials contain polyglycerin and/or poly(vinyl alc.), acrylic resins having acid number >300 mg KOH/g, and other water-soluble polymers, and the resin solids of the compns. have resin acid number >200 mg KOH/g and OH number >100 mg KOH/g. Thus, 40 parts PGL 10 was dissolved in 100 parts aqueous 3% BuOH, mixed with aqueous 13% AC 10LP (polyacrylic acid) 462, GE 191L [poly(N-vinylacetamide)] 150, and aqueous 3% BuOH 398 parts, coated on degreased chromated Al, and baked to form a coating.
- IT 27306-78-1, Silwet L 77
(Silwet L 77; hydrophilic treatment compns. containing polyglycerin and poly(vinyl alc.) and acrylic polymers and water-soluble polymers for fin materials for heat exchangers)
- RN 27306-78-1 HCAPLUS
- CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]- (9CI)
(CA INDEX NAME)



- IC ICM C09K003-18
ICS C08K003-00; C08L029-04; C08L033-02; C08L071-08; C09D129-04; C09D133-00; C09D135-00; C09D171-00; F28F001-32; F28F013-18
- CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 56
- IT 25618-55-7DP, Polyglycerin, reaction products with poly(acrylic acid) lithium salt
(PGL 06; hydrophilic treatment compns. containing polyglycerin and poly(vinyl alc.) and acrylic polymers and water-soluble polymers for fin materials for heat exchangers)
- IT 27306-78-1, Silwet L 77
(Silwet L 77; hydrophilic treatment compns. containing polyglycerin and poly(vinyl alc.) and acrylic polymers and water-soluble polymers for fin materials for heat exchangers)
- IT 79-10-7DP, Acrylic acid, polymers with unsatd. sulfonic acids, salts, reaction products with polyglycerin 9003-04-7DP, Poly(acrylic acid) sodium salt, reaction products with polyglycerin 55738-42-6P, Acrylic acid-glycerin copolymer 109224-05-7DP, Denka Povál K 05, reaction products with poly(acrylic acid) lithium salt 395057-90-6P 395057-91-7P 395057-92-8P, Acrylic acid-formaldehyde-glycerin-melamine copolymer 395057-93-9P, Acrylic acid-formaldehyde-glycerin-urea copolymer 395081-03-5P
(hydrophilic treatment compns. containing polyglycerin and poly(vinyl alc.) and acrylic polymers and water-soluble polymers for fin materials for heat exchangers)
- IT 25035-82-9P, Butyl acrylate-methacrylic acid copolymer
25656-42-2DP, Poly(acrylic acid) lithium salt, reaction products with polyglycerin 38639-64-4P, Acrylic acid-2-hydroxyethyl acrylate copolymer
(hydrophilic treatment compns. containing polyglycerin and poly(vinyl alc.) and acrylic polymers and water-soluble polymers)

for fin materials for heat exchangers)

L39 ANSWER 13 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:923955 HCAPLUS

DOCUMENT NUMBER: 136:38963

TITLE: Coating compositions for modifying hard surfaces

INVENTOR(S): Rohrbaugh, Robert Henry; McDonald, Michael R.;
Carter, John D.; Gosselink, Eugene Paul;
Ghosh, Chanchal Kumar; Jordan, Glenn Thomas,
IV; O'Connor, Helen Frances; Liddle, Heather
Anne; Evers, Marc Francois

PATENT ASSIGNEE(S): Procter & Gamble Company, USA

SOURCE: PCT Int. Appl., 88 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 13

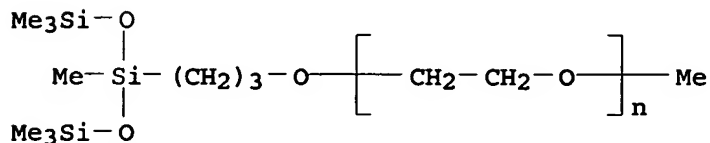
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001096511	A2	20011220	WO 2001-US19058	2001 0614
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WO 2001096511	A3	20020725		
WO 2001096511	C1	20031106		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
WO 2001096516	A1	20011220	WO 2000-US16349	2000 0614
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US 2002028288	A1	20020307	US 2001-828014	2001 0406
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CA 2410600	AA	20011220	CA 2001-2410600	2001 0614

AU 2001068403	A5	20011224	AU 2001-68403		2001 0614
EP 1299481	A2	20030409	EP 2001-946340		2001 0614
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BR 2001011623	A	20030506	BR 2001-11623		2001 0614
JP 2004503662	T2	20040205	JP 2002-510631		2001 0614
US 2002172773	A1	20021121	US 2001-22976		2001 1213
US 6693071	B2	20040217			
PRIORITY APPLN. INFO.:			WO 2000-US16349	W	2000 0614
			US 2001-265059P	P	2001 0130
			US 2001-828014	A	2001 0406
			WO 2001-US19058	W	2001 0614
<p style="text-align: center;"><--</p>					
AB	<p>Materials for coating, coating compns., methods and articles of manufacture comprising a nanoparticle system or employing the same to impart surface modifying benefits for all types of inanimate hard surfaces are disclosed. In some embodiments, dispersement of nanoparticles in a suitable carrier medium allows for the creation of coating compns., methods and articles of manufacture that create multi-use benefits to modified hard surfaces. These surface modifications can produce long lasting or semi-permanent multi-use benefits that include at least one of the following improved surface properties: wetting and sheeting, quick drying, uniform drying, soil removal, self-cleaning, anti-spotting, anti-soil deposition, cleaner appearance, enhanced gloss, enhanced color, minor surface defect repair, smoothness, anti-hazing, modification of surface friction, release of actives and transparency, relative to hard surfaces unmodified with such nanoparticle systems. In some embodiments, actively curing the coating composition on the hard surfaces, including, but not limited to by radiative heating the air surrounding the hard surface with the coating thereon can be used to increase the durability of the hard surface coating.</p>				
IT	27306-78-1, Silwet L-77				

(coating compns. for modifying hard surfaces)

RN 27306-78-1 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]- (9CI)
 (CA INDEX NAME)



IC ICM C11D003-00
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 46, 49, 53
 IT **Carbonates**, uses
 Clays, uses
 Hydroxides (inorganic)
 Mica-group minerals, uses
 Oxides (inorganic), uses
 Silicates, uses
 Smectite-group minerals
 (coating compns. for modifying hard surfaces)
 IT 77-92-9, Citric Acid, uses 1318-74-7, Kaolinite, uses
 1318-93-0, Montmorillonite, uses 1335-30-4, Aluminum silicate
 7758-29-4, STPP 9016-45-9, Tergitol NP-9 12173-60-3, Illite
 12304-65-3, Hydrotalcite 15827-60-8, DTPMP 17084-08-1,
 Fluorosilicate 27306-78-1, Silwet L-77 29132-58-9,
 Acrylic acid-maleic acid copolymer 37220-90-9, Lithium
 magnesium silicate 37220-90-9D, Lithium magnesium
 silicate, fluorosilicate derivative 39316-51-3, Plurafac RA30
 67674-67-3, Q2-5211 139948-74-6, Laponite B 204934-30-5,
 Ureclear 226924-42-1, Disperal P2 227605-22-3, Laponite RD
 258843-02-6, Acusol 480
 (coating compns. for modifying hard surfaces)

L39 ANSWER 14 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 2001:857636 HCAPLUS
 DOCUMENT NUMBER: 136:7801
 TITLE: Hydrophilic composition for coating aluminum
 fins of heat exchanger
 INVENTOR(S): Matsuda, Hideki; Moroboshi, Koichi; Murata,
 Masahiro; Haruta, Yasuhiko
 PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001329377	A2	20011127	JP 2000-145766	2000 0517

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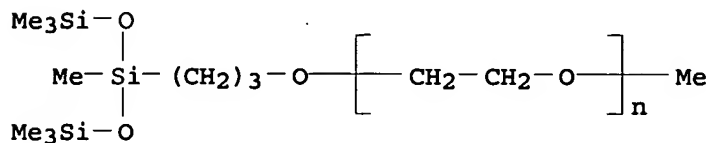
PRIORITY APPLN. INFO.:

JP 2000-145766

2000
0517

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- AB Title coating composition with long-lasting hydrophilicity and good anticorrosion and deodorization comprises (A) poly(vinyl alc.) with saponification degree $\geq 87\%$ and (B) acrylic polymers having acid value of ≥ 300 mg KOH/g and neutralized by basic compds. with no b.p. $\leq 180^\circ$ and undecomposable at $\leq 180^\circ$. Thus, an aluminum plate was coated with a 1 μ m-thick layer comprising poly(vinyl alc.) Denka Poval K-05 and poly(acrylic acid) Jurymer AC 10LP neutralized by LiOH \cdot H₂O, and baked at 230° for 10 s to give a test piece showing good results.
- IT 27306-78-1, Silwet L 77
(preparation of hydrophilic composition for coating heat exchanger fin)
- RN 27306-78-1 HCAPLUS
- CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]- (9CI)
(CA INDEX NAME)



- IC ICM C23C022-56
ICS C09D129-04; C09D133-02; C09K003-18; C23C022-02; F28F001-32
- CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 56
- ST PVA acrylic lithium salt hydrophilic coating
heat exchange fin
- IT 9003-04-7P, Poly(acrylic acid) sodium salt 25656-42-2P,
Poly(acrylic acid) lithium salt 52880-57-6P,
Poly(acrylic acid) triethanol amine salt 345348-88-1P, Butyl
acrylate-methacrylic acid copolymer lithium salt
(preparation of hydrophilic composition for coating heat exchanger fin)
- IT 148-79-8, 2-(4-Thiazolyl)-benzimidazole 577-11-7, Newcol 290M
9003-08-1, Cymel 370 17927-72-9, Titabond 50 27306-78-1
, Silwet L 77
(preparation of hydrophilic composition for coating heat exchanger fin)

L39 ANSWER 15 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:847390 HCAPLUS

DOCUMENT NUMBER: 136:7757

TITLE: Hydrophilic composition for coating aluminum
fins of heat exchangerINVENTOR(S): Murata, Masahiro; Matsuda, Hideki; Moroboshi,
Koichi; Haruta, Yasuhiko

PATENT ASSIGNEE(S): Kansai Paint Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001323257	A2	20011122	JP 2000-145709	2000 0517

PRIORITY APPLN. INFO.:

JP 2000-145709

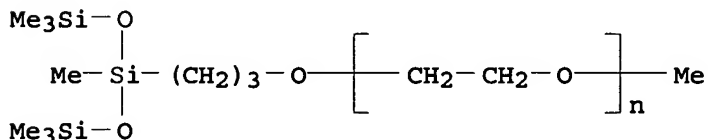
2000
0517

AB Title coating composition with long-lasting hydrophilicity and good anticorrosion and deodorization comprises (A) polyglycerin and (B) acrylic polymers having acid value of ≥ 300 mg KOH/g, wherein the acid value of total solids content is ≥ 200 mg KOH/g and the hydroxyl value ≥ 100 mg KOH/g. Thus, an aluminum plate was coated with a 1 μ m-thick layer comprising polyglycerin PGL10 and poly(acrylic acid) AC10LP, and baked at 230° for 10 s to give a test piece showing good results.

IT 27306-78-1, Silwet L 77
(preparation of hydrophilic composition for coating heat exchanger fin)

RN 27306-78-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]- (9CI)
(CA INDEX NAME)



IC ICM C09K003-18
ICS B05D007-14; B05D007-24; C09D005-00; C09D129-04; C09D133-02;
C09D171-08; F28F013-18

CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 56

IT 25035-82-9P, Butyl acrylate-methacrylic acid copolymer
25656-42-2P, Poly(acrylic acid) lithium salt
38639-64-4P, Acrylic acid-2-hydroxyethyl acrylate copolymer
(preparation of hydrophilic composition for coating heat exchanger fin)

IT 148-79-8, 2(4-Thiazolyl)-benzimidazole 577-11-7, Newcol 290M
9002-89-5, Polyvinyl alcohol 9003-08-1, Cymel 370 17927-72-9,
Titabond 50 27306-78-1, Silwet L 77
(preparation of hydrophilic composition for coating heat exchanger fin)

L39 ANSWER 16 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2001:618244 HCAPLUS

DOCUMENT NUMBER: 135:196818

TITLE: Polymer compositions having specified pH for improved dispensing and improved stability of wrinkle reducing compositions and methods of use

INVENTOR(S): Frankenbach, Gayle Marie; Trinh, Toan; Barnabas, Mary Vjayarani; Corona, Alessandro, III; Shaw, John Henry, Jr.; Smith, John William; Brown, Donald Ray; Nijakowski, Timothy Roy; Hubesch, Bruno Albert Jean;

Detzel, Gabrielle Holly; Alwart, Todd Stephen;
 Candido, Anne Marie; Bush, Stephen Gary;
 Collias, Dimitris Ioannis; Gregg, Ellis B.;
 Bray, Earl, Jr.
 PATENT ASSIGNEE(S): The Procter + Gamble Company, USA
 SOURCE: PCT Int. Appl., 148 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 2
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001061100	A2	20010823	WO 2001-US4691	2001 0213
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WO 2001061100	A3	20020307		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
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JP 2003533598	T2	20031111	JP 2001-559931	2001 0213
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AT 299198	E	20050715	AT 2001-910654	2001 0213
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US 2003209686	A1	20031113	US 2002-307885	2002

1202

US 6652766
PRIORITY APPLN. INFO.:

B2 20031125

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US 2000-182381P

P

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US 2000-634379

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WO 2001-US4691

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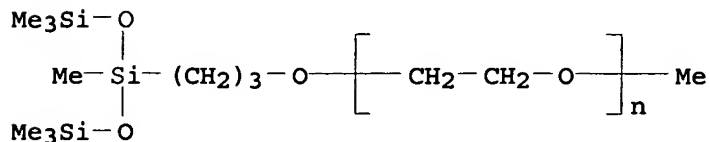
AB An aqueous composition for controlling wrinkles in fabric comprises: (a) an effective amount to control wrinkles in fabric of a polymer comprising carboxylic acid moieties; (b) a carrier comprising water; (c) optionally, silicone compds. and/or emulsions; (d) optionally, an effective amount of a supplemental wrinkle control agent selected from the group consisting of an adjunct polymer free of carboxylic acid moieties, fabric care saccharides, lithium salts, fiber fabric lubricants, and mixts. thereof; (e) optionally, an effective amount of a supplemental surface tension control agent; (f) optionally, an effective amount to absorb or reduce malodor, of odor control agent; (g) optionally, an effective amount to provide olfactory effects of perfume; (h) optionally, an effective amount of solubilized, water-soluble, antimicrobial preservative; (i) optionally, an effective amount of a buffering system; (j) optionally, adjunct ingredients selected from the group consisting of adjunct odor-controlling materials, chelating agents, viscosity control agents, addnl. antistatic agents, insect and moth repelling agents, colorants, anticlogging agents, and mixts. thereof; wherein the composition has a pH of from 3 to 7 and a viscosity of less than 20 cP. Polymer compns., while providing suitable wrinkle control, also tend to dispense poorly when sprayed. The present invention shows that when viscosity of polymer compns. is minimized spray dispensing improves.

IT 27306-78-1, Silwet L77

(polymer compns. having specified pH for improved dispensing and improved stability of wrinkle reducing compns. and methods of use)

RN 27306-78-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy]- (9CI)
(CA INDEX NAME)



IC ICM D06M

CC 40-9 (Textiles and Fibers)

IT 7585-39-9D, β -Cyclodextrin, hydroxypropyl ethers
27306-78-1, Silwet L77 67674-67-3, Q2-5211

224444-94-4, Diahold ME 356522-89-9, Luviflex Soft
 356525-08-1, LaraCare A 200 356528-07-9, Dow Corning 2-1084
 (polymer compns. having specified pH for improved dispensing
 and improved stability of wrinkle reducing compns. and methods
 of use)

L39 ANSWER 17 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:668039 HCAPLUS

DOCUMENT NUMBER: 127:298531

TITLE: Cosmetic cleaning compositions containing a
 polyacrylamide thickener

INVENTOR(S): Dubief, Claude; Cauwet-Martin, Daniele

PATENT ASSIGNEE(S): L'Oreal S. A., Fr.

SOURCE: Eur. Pat. Appl., 9 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

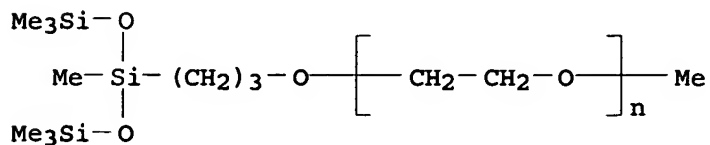
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 796614	A1	19970924	EP 1997-400283	1997 0207
EP 796614	B1	20010314		
R: DE, ES, FR, GB, IT				
FR 2746304	A1	19970926	FR 1996-3542	1996 0321
FR 2746304	B1	20010907		
US 5804207	A	19980908	US 1997-816800	1997 0319
PRIORITY APPLN. INFO.:			FR 1996-3542	A 1996 0321
			EP 1997-400283	A 1997 0207
AB	Hair and skin cleaning compns. containing a polyacrylamide thickener, surfactants, and electrolytes are claimed. A shampoo contained 28% solution of ethoxylated sodium lauryl sulfate 11.2, 28% oleylamidopropyl di-Me betaine 8.4, selenium disulfide 0.5, sodium chloride 3, 40% polyacrylamide solution 1, preservative, colors, perfumes and water q.s. 100 g.			
IT	7439-93-2D, Lithium, salts, biological studies 27306-78-1, Silwet L 77 (cosmetic cleaning compns. containing polyacrylamide thickener)			
RN	7439-93-2 HCAPLUS			
CN	Lithium (7CI, 8CI, 9CI) (CA INDEX NAME)			

Li

RN 27306-78-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy] - (9CI)
(CA INDEX NAME)



IC ICM A61K007-50

ICS A61K007-48; A61K007-06

CC 62-3 (Essential Oils and Cosmetics)

IT Alcohols, biological studies

Alkali metal salts

Alkaline earth salts

Bicarbonates

Borates

Carbonates, biological studies

Carboxylic acids, biological studies

Chlorides, biological studies

Hydroxides (inorganic)

Monoglycerides

Nitrates, biological studies

Peroxyulfates

Salts, biological studies

Sulfates, biological studies

Transition metal salts

(cosmetic cleaning compns. containing polyacrylamide thickener)

IT 57-03-4D, Glycerophosphoric acid, salts 57-10-3, Palmitic acid, biological studies 57-11-4, Stearic acid, biological studies 64-19-7D, Acetic acid, salts, biological studies 107-36-8D, Isethionic acid, acyl derivs. 107-43-7D, Betaine, cocoacyl derivs. 107-97-1D, Sarcosinic acid, acyl derivs. 112-38-9, Undecylenic acid 112-80-1, Oleic acid, biological studies 123-43-3D, Sulfoacetic acid, alkyl ether derivs. 141-22-0, Ricinoleic acid 143-07-7D, Lauric acid, acyl derivs. 151-21-3, Sodiumlauryl sulfate, biological studies 617-65-2D, Glutamic acid, acyl derivs. 5138-18-1D, Sulfosuccinic acid, alkyl ether derivs. 7439-93-2D, Lithium, salts, biological studies 7439-95-4D, Magnesium, salts, biological studies 7439-96-5D, Manganese, salts, biological studies 7440-00-8D, Neodymium, salts, biological studies 7440-24-6D, Strontium, salts, biological studies 7440-39-3D, Barium, salts, biological studies 7440-54-2D, Gadolinium, salts, biological studies 7440-65-5D, Yttrium, salts, biological studies 7440-66-6D, Zinc, salts, biological studies 7488-56-4, Selenium disulfide 7664-38-2D, Phosphoric acid, alkyl ether derivs., biological studies 7664-93-9D, Sulfuric acid, alkyl ether derivs., biological studies 9003-05-8, Polyacrylamide 10042-76-9, Strontium nitrate 10476-85-4, Strontium chloride 12441-09-7D, Sorbitan, esters with fatty acids 26100-47-0, Acrylamide-ammoniumacrylate copolymer 27306-78-1, Silwet

L 77 35429-19-7, Salcare SC 92 40623-73-2 148093-12-3,
SEPIGEL305

(cosmetic cleaning compns. containing polyacrylamide thickener)

L39 ANSWER 18 OF 18 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:668038 HCAPLUS

DOCUMENT NUMBER: 127:298530

TITLE: Cleaning cosmetic composition containing an oxyalkylated silicones

INVENTOR(S): Dubief, Claude; Cauwet-Martin, Daniele

PATENT ASSIGNEE(S): L'Oreal S. A., Fr.

SOURCE: Eur. Pat. Appl., 12 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 796615	A1	19970924	EP 1997-400284	1997 0207
EP 796615	B1	20010124	<--	
R: DE, ES, FR, GB, IT				
FR 2746305	A1	19970926	FR 1996-3543	1996 0321
FR 2746305	B1	19980430	<--	
ES 2155656	T3	20010516	ES 1997-400284	1997 0207
US 6074633	A	20000613	US 1997-825712	1997 0319
PRIORITY APPLN. INFO.:			FR 1996-3543	A 1996 0321
			EP 1997-400284	A 1997 0207

AB Hair and skin cleaning cosmetic composition containing oxyalkylated silicones (Markush structure given), surfactants, and electrolytes are claimed. A shampoo contained 28% solution of ethoxylated sodium lauryl sulfate 16.8, 30% solution of cocoyl betaine 2.7, oxyalkylated silicone 1, lithium chloride 12, preservative, colors, perfumes and water q.s. 100 g.

IT 7439-93-2D, Lithium, salts, biological studies 27306-78-1, Silwet L 77
(cleaning cosmetic composition containing oxyalkylated silicones)

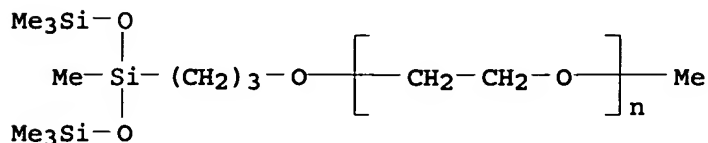
RN 7439-93-2 HCAPLUS

CN Lithium (7CI, 8CI, 9CI) (CA INDEX NAME)

Li

RN 27306-78-1 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), α -methyl- ω -[3-[1,3,3,3-tetramethyl-1-[(trimethylsilyl)oxy]disiloxanyl]propoxy] - (9CI)
(CA INDEX NAME)



IC ICM A61K007-50

ICS A61K007-48; A61K007-06

CC 62-3 (Essential Oils and Cosmetics)

ST cleaning cosmetic oxyalkyl silicone surfactant electrolyte;
shampoo lauryl sulfate lithium chloride silicone

IT Alcohols, biological studies

Alkali metal salts

Alkaline earth salts

Bicarbonates

Borates

Carbonates, biological studies

Carboxylic acids, biological studies

Chlorides, biological studies

Hydroxides (inorganic)

Monoglycerides

Nitrates, biological studies

Peroxyulfates

Salts, biological studies

Sulfates, biological studies

Transition metal salts

(cleaning cosmetic composition containing oxyalkylated silicones)

IT 57-03-4D, Glycerophosphoric acid, salts 57-10-3, Palmitic acid,
biological studies 57-11-4, Stearic acid, biological studies

64-19-7D, Acetic acid, salts, biological studies 107-36-8D,

Isethionic acid, acyl derivs. 107-43-7D, Betaine, cocoacyl

derivs. 107-97-1D, Sarcosinic acid, acyl derivs. 112-38-9,

Undecylenic acid 112-80-1, Oleic acid, biological studies

123-43-3D, Sulfoacetic acid, alkyl ether derivs. 141-22-0,

Ricinoleic acid 143-07-7D, Lauric acid, acyl derivs. 151-21-3,

Sodiumlauryl sulfate, biological studies 617-65-2D, Glutamic

acid, acyl derivs. 5138-18-1D, Sulfosuccinic acid, alkyl ether

derivs. 7439-93-2D, Lithium, salts,

biological studies 7439-95-4D, Magnesium, salts, biological

studies 7439-96-5D, Manganese, salts, biological studies

7440-00-8D, Neodymium, salts, biological studies 7440-24-6D,

Strontium, salts, biological studies 7440-39-3D, Barium, salts,

biological studies 7440-54-2D, Gadolinium, salts, biological

studies 7440-65-5D, Yttrium, salts, biological studies

7440-66-6D, Zinc, salts, biological studies 7664-38-2D,

Phosphoric acid, alkyl ether derivs., biological studies

7664-93-9D, Sulfuric acid, alkyl ether derivs., biological studies

9016-00-6, Polydimethylsiloxane 10042-76-9, Strontium nitrate

10476-85-4, Strontium chloride 12441-09-7D, Sorbitan, esters

with fatty acids 27306-78-1, Silwet L 77 31900-57-9,
Polydimethylsiloxane
(cleaning cosmetic composition containing oxyalkylated silicones)